"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

Selecting solvents for dewaxing residual oils from Surakhany and Koschaguyl crude oils. V. K. Lebedeva, A. V. [illegible] and K. F. Pisarevskaya. Neftyanoe Khoz. 1938, No. 12, 21 [illegible] with MeEtCO [illegible] with acetone [illegible] and a chlorinated solvent [illegible] of oil decreasing in that order. These solvents when applied at −30° may produce oils of pour point [illegible] to −20 [illegible]. These oils usually have a lower viscosity index than oils of higher pour point. The quality of the oil and its yield are lowered when the contents of MeEtCO, acetone and chlorinated solvent in the mixt. are above 35%. The exact nature of the chlorinated solvent is not stated.

A. A. Boehtlingk

A10-51A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

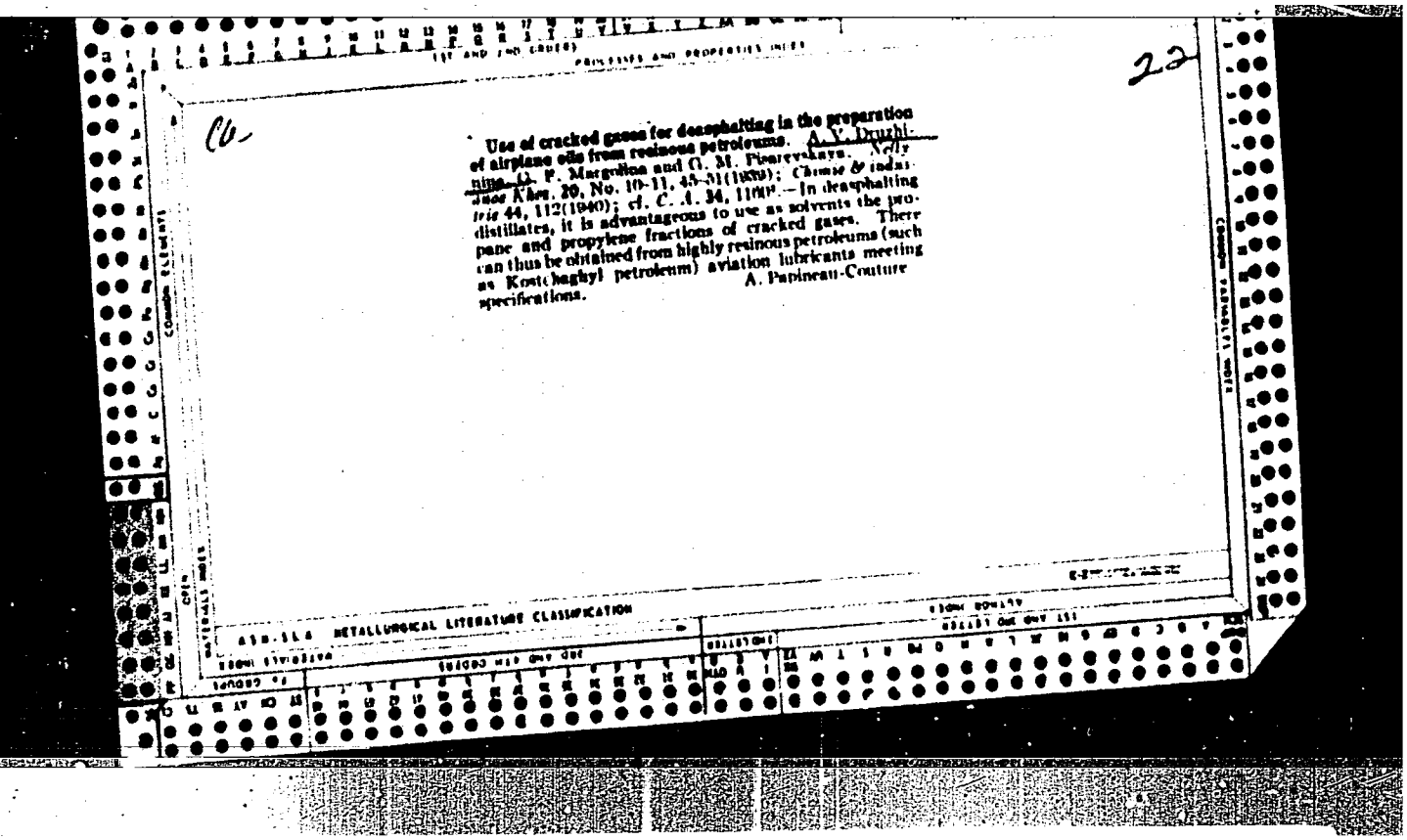
ca

Selection of natural clays for percolation filtration. A. D. Druzhinina, Babenkov, M. S. Perel'miter and Shneerson. Neftyanoe Khoz. 1939, No. 3, 48-50.—Final refining of Surakhany oils with domestic clays yields quite satisfactory results. The following clays were tested and found best in the following increasing order: Zikeev, Novo Simbirsk, Zamukinsk and Volkovsk. The individual properties of these clays are discussed and the expts. are described.

A. A. Boehtlingk

METALLURGICAL LITERATURE CLASSIFICATION

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9



Use of cracked gases for deasphalting in the preparation of airplane oils from resinous petroleums. A. V. Druzhinina, G. P. Margulina and G. M. Pisarevskaya. *Neftyanoe Khoz.* 20, No. 10-11, 45-51 (1938); *Chimie & industrie* 44, 112(1940); cf. *C. A.* 34, 1104⁹. — In deasphalting distillates, it is advantageous to use as solvents the propane and propylene fractions of cracked gases. There can thus be obtained from highly resinous petroleums (such as Kostchaghyl petroleum) aviation lubricants meeting specifications. A. Papineau-Couture

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

Druzhinina, A.V.

AUTHORS: Druzhinina, A.V. and Tarmanyan, G.S. 65-7-8/14

TITLE: On the Catalytic Influence of Metals on the Corrosive Activity of Motor Oil (O kataliticheskom vliyanii metallov na korrozionnuyu agressivnost' motornykh masel)

PERIODICAL: Khimiya i Tekhnologiya Topliva i Masel, 1957, No.7, pp.43-49 (USSR)

ABSTRACT: The influence of metals and antifriction coatings on the corrosive activity of motor oils used in modern engines was investigated. Differences in the corrosion sensitivity of lead, copper and indium towards oxidation products of oils was demonstrated. It was established that lead is more sensitive to corrosion by oil oxidation products than indium and copper. A relationship between the catalytic influence of copper on oxidation of oils and the corrosive attack of oils on lead and lead and indium containing antifriction bearing coatings was established. It was shown that anti-corrosive additives by forming on the surface of metals protective films neutralise the catalytic influence of metal on the oxidation of oil and thus protect the metal from corrosion by the oil oxidation products. There are 3 figures, 5 tables and 4 references, 3 of which are Russian and 1 English.

ASSOCIATION: VNII NP

AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

Druzhinina, A. V.

65-10-8/13

AUTHORS: Druzhinina, A.V., Tarmanyan, G.S. and Morozova, I.V.

TITLE: On the Mechanism of the Washing Action of Alkylphenolic Additives (O mekhanizme moyushchego dystviya alkilfenol'nykh prisadok)

PERIODICAL: Khimiya i Tekhnologiya Topliva i Masel, 1957, No.10, pp. 41-46 (USSR)

ABSTRACT: After a brief review of views expressed in the literature on the action of detergent additives on the operating properties of oils, the results of an investigation of the influence of an additive TsIATIM-339 on changes in the chemical composition and operating properties of oils are given. The tests of oils were carried out on Diesel single-cylinder engines OKB and VT-9-3 as well as on a full-scale engine YaA3-204. Oil MC-20 from Groznenskoy crude and experimental samples of Diesel oil from Tuymazinskaya Devonian crude with and without the above additive were tested. By adsorption separation on silicagel the characteristics hydrocarbon group compositions of oils before and after tests were determined. The experimental results are given in Tables 1-4. Conclusions: alkylphenolic additives of the typeTsIATIM-339 belong to a group of chemically-active substances, reacting with products formed in oil during its operation in an engine. The washing action

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65-10-8/13

On the Mechanism of the Washing Action of Alkylphenolic Additives

of alkylphenolic additives is due to: a) neutralisation of acid products by exchange reaction with the formation of oil soluble organic barium salts; b) an increase in selective solubility of asphalteno-resinous substances in oil in the presence of separated-in-the-exchange reaction alkylphenols. The correct concentration of alkylphenolic additives in oils should be selected for each individual case in relation to the operating conditions of engines for which the oil is intended. There are 4 tables and 9 references, 6 of which are Russian and 3 English.

ASSOCIATION: VNII NP

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, ALEKSANDRA VASIL'YEVNA

PHASE I BOOK EXPLOITATION 558

Dintses, Arkadiy Il'ich, and Druzhinina, Aleksandra Vasil'yevna

Sinteticheskiye smazochnyye masla (Synthetic Lubricants) Moscow, Gostoptekhizdat, 1958. 350 p. 4,000 copies printed.

Chief Ed.: L'vova, L.A.; Tech. Ed.: Polosina, A.S.

PURPOSE: The book is intended for specialists in the field of selecting, synthesizing and using lubricants for instruments and machines operating under high and low temperatures and heavy loads. The book may also be used by students specializing in the preparation and use of lubricants.

COVERAGE: The author discusses synthetic lubricants for equipment and engines which operate under high and low temperatures, and under heavy loads where a high coefficient of friction is present. The author examines synthetic hydrocarbon oils, polysiloxane liquids (silicones), esters prepared from carboxylic acids, polyalkylene glycols, fluorine and carbon chlorofluoride.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

He also discusses additives used in preparing lube oils. A short account is also given on obtaining compounds, giving their physical and chemical characteristics. Chapter 4, "Polyalkylene glycols and their use as a lubricant," was written by Candidate of Technical Sciences A.I. L'vova. The section of Chapter 7 entitled "Additives which improve the lubricating properties of oil," was written by Candidate of Technical Sciences A.M. Ravikovich. The subsections on autoxidation of hydrocarbons, esters, and the mechanism of the function of antioxidants was written by Junior Scientific Associate P.B. Terent'yev. The bibliography contains 306 references, 55 of which are Soviet, 218 English, 29 German, 4 French.

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Card 10/10

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DELUZHININA, A.V.

PHASE I BOOK EXPLOITATION SOV/5055

Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh. 3d, 1958.

Gidrodinamicheskaya teoriya smazki. Opory skol'zheniya. Smazka i smazochnyye materialy (Hydrodynamic Theory of Lubrication. Slip Bearings. Lubrication and Lubricant Materials) Moscow, Izd-vo AN SSSR. 422 p. Errata slip inserted. 3,800 copies printed. (Series: Its: Trudy, v. 3)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Eds. for the Section "Hydrodynamic Theory of Lubrication and Slip Bearings": Ye. M. Gut'yar, Professor, Doctor of Technical Sciences, and A. K. D'yachkov, Professor, Doctor of Technical Sciences; Resp. Ed. for the Section "Lubrication and Lubricant Materials": G. V. Vinogradov, Professor, Doctor of Chemical Sciences; Ed. of Publishing House: M. Ya. Klebanov; Tech. Ed.: O. M. Gus'kova.

PURPOSE: This collection of articles is intended for practicing engineers and research scientists.

COVERAGE: The collection, published by the Institut mashinovedeniya AN SSSR (Institute of Science of Machines, Academy of Sciences USSR) contains papers presented at the III Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh (Third All-Union Conference on Friction and Wear in Machines) which was held April 9-15, 1958. Problems discussed were in ... hydrodynamic Theory of Lubrication and ...

Hydrodynamic Theory (Cont.) SOV/5055

Use of Lubricant Materials

Chemical Composition and Operational Lubrication Materials

~~Card 6/~~ 7

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, A.V.; RYSAKOV, M.V.; GOL'DSHTEYN, D.L.; NIKOLAYEVA, V.G.; [redacted]MACHINA, M.S.; ROGOV, S.P.

Production low pour-point motor and industrial oils from different crudes by means of hydrogenation and carbamide dewaxing methods. Trudy VNII NP no.7:166-180 '58. (MIRA 12:10)
(Petroleum--Refining) (Lubrication and lubricants)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

TSIGURO, T.A.; DRUZHININA, A.V.

Effect of antioxidant additives on motor oils and fractions of hydrocarbons isolated from them. Trudy VNII NP no.7:283-289 '58. (MIRA 12:10)
(Lubrication and lubricants--Additives)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZININOVA, A.V.

H-23

COUNTRY : Czechoslovakia
CATEGORY :

ABS. JOUR. : RZKhim., No. 1959, No. 87937

AUTHOR : Goldstejn, D.L.; Rysakov, M.V.; Skripnik, L.M.
INST. : All Union Scientific Research Institute of **
TITLE : Hydrogenation Refining of Mineral Oil

ORIG. PUB. : Chem. prumysl, 1958, 8, No 11, 574-576

ABSTRACT : Description of method developed at All Union Scientific Research Institute of Petroleum (USSR, Moscow) for hydrogenation refining (HR) of power-engineering oil and motor oil, over Co-Mo catalyst at pressure of 40-300 atmospheres. As a result of HR the transformer- and turbine oil becomes highly stable to oxidation without addition of special inhibitors. Viscosity of refined oil for motors can be raised by addition of polyisobutylene; solidification point lowered with polymethacrylate. Motor fuel is obtained as a byproduct of the HR process. -- Ya. Satunovskiy

CARD:

* Druzininova, A.V.; Rogov, S.P.
** Petroleum (USSR, Moscow)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, A. V., ZHERDENA, L. G., KARASEVA, A. A., VOZNESENSKAYA, E. V., ALTSHULER, A. E., KROL, B. B., OROCHKO, D. I., AKIMOV, V. S., MIKHAYLOV, B. B., AGAFONOV, A. V.

"Production of Lubricating Oils and Paraffin from Sulfurous Oils in the USSR."

Report submitted at the Fifth World Petroleum Congress, 30 May - 5 June 1959. New York City.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

TSIGURO, T.A.; DRUZHININA, A.V.; FILIPPOV, V.F.

Performance of motor oils and hydrocarbon groups derived from them. Khim.i tekh.topl.i masel 4 no.2:18-24 F '59. (MIRA 12:2)

(Lubrication and lubricants) (Hydrocarbons)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

S/081/61/000/014/023/030
B117/B203

AUTHOR: Druzhinina, A. V.

TITLE: Reduction of wear in engines operating with sulfurous diesel fuel by means of alkaline additives

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1961, 540, abstract 14N226. (Tr. 3-y Vses. konferentsii po treniyu i iznosu v mashinakh, v. 3, M., AN SSSR, 1960, 344 - 348)

TEXT: As a result of tests of engines operating with sulfurous diesel fuel (> 1% S), the introduction of alkaline additives was found to be necessary for reducing the wear. The alkali concentration must be increased with increasing S concentration in the fuel. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

30219
S/081/61/000/019/063/085
B117/B110

11.9100
AUTHORS: Druzhinina, A. V., Gol'dshteyn, D. L., Rysakov, M. V.

TITLE: Production of low-solidifying industrial oils and motor oils from various sulfuric raw materials by hydrogenation and deparaffination with carbamide

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 420, abstract 19M147 (Sb. "Khimiya sera- i azotorgan. soyedineniy, soderzhashchikhsya v neftyakh i nefte-produktakh", Ufa, v. 3, 1960, 377 - 387)

TEXT: It was found that industrial oils and motor oils can be produced by hydrogenation and deparaffination of primary and secondary distillates with carbamide (raw material: wide distillation fraction from Romashki petroleum at 320° - 460°C, gas oil fraction obtained by catalytic cracking of heavy distillation material of the same petroleum at 200 - 485°C, and a fraction obtained by catalytic cracking of masut at 200 - 500°C). The chemical-technological nature of the process is due to the action of hydrogen upon high-molecular substances containing sulfur, nitrogen, and

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S/081/61/000/019/063/085
B117/B110

Production of low-solidifying...

oxygen in the distillates at high temperatures accompanied by their decomposition under the formation of low-molecular hydrocarbons, hydrogen sulfide, and other compounds. At the same time, unsaturated hydrocarbons are converted into saturated ones, the content of methane-naphthene hydrocarbons increases and that of tar and polycyclic aromatics is reduced. The content of high-quality oil components is not affected by hydrogenation. The deparaffination of hydrogenated distillates with carbamide is practically accompanied by a complete removal of largely normally structured paraffins. The solidifying point is thus considerably reduced. A diagram of oil production is given. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, A.W.; KOROTKOV, P.I.; FILIPPOV, V.F.

Highly effective anticorrosive properties of motor oils from sulfur-bearing crudes. Khim.sera-i azotorg.soed. sod.v neft.i nefteprod. 3:487-490 '60. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.
(Mineral oils—Additives) (Corrosion and anticorrosives)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

3552

S/081/62/000/006/088/117
B167/B101

11.9700

AUTHORS: Druzhinina, A. V., Tarmanyan, G. S., Myachina, M. S., Morozova, I. V.

TITLE: Alkyl phenol additives from formaldehyde condensation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 541-542, abstract 6M262 (Sb. "Prisadki k maslam i toplivam". M., Gostoptekhizdat, 1961, 20-26)

TEXT: A description is given of the synthesis of the additives Vnii NP-370, Vnii NP-371, and Vnii NP-372, which are the oil concentrates (~50% in spindle oil No. 2) of the Ca, Ba, and Li salt, respectively, of the condensation product of alkyl phenol with CH_2O. The phenol is alkylated with polymer distillate in the presence of phenol sulfonic acid as a catalyst, which is previously prepared by treating phenol with H_2SO_4 (8% of the combined amount of phenol and polymer distillate). The additive Vnii NP-371 (viscosity 17-80 centistokes/100°C) contains 7-9% of Ba. Prolonged treatment with $Ba(OH)_2 \cdot 8H_2O$ at 145°C doubles the Ba

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B167/B101

Alkyl phenol additives from ...

content without significantly altering the viscosity. The additive Vnii NP-370 contains 2-2.5% of Ca, which increases to 3-3.5% if the additive is prepared by treating alkyl phenol simultaneously with CH_2O (as a 37% aqueous solution) and CaO in the presence of a promoter. The effect of the alkyl phenol:CH_2O ratio and of some other conditions on the quality of the additive Vnii NP-370 is also investigated. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

36352
S/081/62/000/005/079/112
B162/B101

11.9700

AUTHORS: Druzhinina, A. V., Tsiguro, T. A., Filippov, V. F.

TITLE: Effect of the main types of additives on the operating characteristics and process of oxidation of oils in an internal combustion engine

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 527, abstract 5M211 (Sb. "Prisadki k maslam i toplivam". M., Gostoptekhizdat, 1961, 247-253)

TEXT: An investigation is made of the effect of additives--p-tert-alkyl phenolate of Ba (I), phenyl-α-naphthylamine (II), and tributyl phosphite in AC-10.7 (AS-10.7) oils (from sulfurous petroleum) and industrial-59 oil, and also in fractions of naphthene paraffin hydrocarbons, fractions of monocyclic aromatic hydrocarbons and fractions of polycyclic aromatic hydrocarbons separated from these oils, on the accumulation of oxidation products in the oils during tests on the IT9-2 (IT9-2) and GAZ-51 (GAZ-51) engines. It is found that the quantity of deposits in grooves, rings,

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B162/B101

Effect of the main types ...

and the piston of the engine increases linearly with the operating time, and that I is most effective in reducing the quantity of these deposits. It is shown that, during the period in which the oil is working in the engine, peroxide compounds, free and esterified hydroxy acids, carbonyl compounds and carboxylic acids accumulate in it, and the accumulation of these oxidation products takes place to a much greater extent (2 - 4 times more) in the fractions of naphthens paraffin hydrocarbons than in the oils or aromatic fractions; the accumulation of oxidation products in the oil starts without an induction period at the moment when the engine starts operating. The additives reduce the formation of peroxide compounds in the working oil by a factor of 2 - 3 (the most effective is II, the least is I), hydroxy acids by 20 - 60% (most effective is II), carbonyl compounds by a factor of 2 - 3 (the most effective are I and II) and carboxylic acids by a factor of 2 - 3 (the most effective is II). On the basis of the results obtained, compound additives were prepared, consisting of 2 additives of different types, and from the results of testing the additives in oils MK-22 (MK-22) and DS-11 (DS-11) the most effective proved to be

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

Effect of the main types ... S/081/62/000/005/079/112
B162/B101

combinations of Tsiatim-339 + DF-1 (DF-1), Tsiatim-339 + AFB (AFB) (Ba alkyl phenolate) and PMSya (PMSya) + Vnii np-371. [Abstracter's note: Complete translation.]

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APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

BLAGOVIDOV, I.F.; BOROVAYA, M.S.; DRUZHININA, A.V.; DERYABIN, A.A.; ZASLAVSKIY, Yu.S.; MONASTYRSKIY, V.N.; PUCHKOV, N.G.; FILIPPOV, V.F.

Selecting additives to oils for various uses. Khim. i tekh. topl. i masel. 8 no.3:54-62 Mr '63. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.
(Lubrication and lubricants—Additives)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

LUNEVA, V.S.; DRUZHININA, A.V.; Prinimala uchastiye BURDENYUK, I.N., starshiy laborant

Using the potentiometric method in investigating the acid-base properties of impurities and lubricants. Neftepererab. i neftekhim. no.12:11-13 '63. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, A.V.; TARMANYAN, G.S.; MOROZOVA, I.V.; RUTTER, A.A.

Plant production of VNIINP-370 and VNIINP-371 additives. Neftepер. i neftekhim. no.5:7-12 '64. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.

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L 20632-66 EWT(m)/T DJ

ACC NR: AP6011220 (A) SOURCE CODE: UR/0413/66/000/006/0057/0057

INVENTOR: Blagovidov, I. F.; Druzhinina, A. V.; Monastyrskiy, V. N.; Puchkov, N. G.; Deryabin, A. A.; Borovaya, M. S.; Filippov, V. F.; Avaliani, T. K.; Zaslavskiy, Yu. S.; Tarmanyan, G. S.; Shor, G. I.; Dmitriyeva, N. A.; Belyanchikov, G. P.; Kuliyev, A. M.; Suleymanova, F. G.; Zaynalova, G. A.; Sadykhov, K. I.

ORG: none

TITLE: Preparative method for motor oils. Class 23, No. 179868

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 57

TOPIC TAGS: lubricating oil, lubricant additive

ABSTRACT: An Author Certificate has been issued for a preparative method for motor oils, involving the introduction of additives. To impart the required service properties, the additives used are an alkylphenol-formaldehyde condensation product (3—15%), a sulfonate additive (1—6%), an additive based on xanthates or dithiophosphates (0.5—1%), and an organosilicon additive (0.003—0.005%) [the additives are no further identified in the source]. [SM]

SUB CODE: 11/ SUBM DATE: 02Aug62/ ATD PRESS: 4225

Card 1/1 UDC: 665.521.5002.237

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, E.I., aspirant

Activity of the enzyme aldolase in healthy children and in angiocholecystitis. Vop. okh. mat. i det. 7 no.2:23-26 F '62. (MIRA 15:3)

1. Iz detskoy klinicheskoy bol'nitsy No.9 Permi (glavnyy vrach - zasluzhennyy vrach RSFSR M.Ye. Snezhko) Nauchnyy rukovoditel' raboty - zasluzhennyy deyatel' nauki prof. D.D. Lebedev.

(ALDOLASE) (GALL BLADDER--DISEASES)
(BILE DUCTS--DISEASES)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, R.I., aspirant

Cardiovascular system in angiocholecystitis in children. Vop.okh. mat. i det. 7 no.12:30-35 D'62. (MIRA 16:7)

1. Iz detskoy klinicheskoy bol'nitsy no.9 Permi (glavnyy vrach-zasluzhennyy vrach RSFSR M.Ye.Snezhko, nauchnyy rukovoditel' raboty - zasluzhennyy deyatel' nauki prof. D.D.Lebedev).

(BILIARY TRACT--DISEASES)
(CARDIOVASCULAR SYSTEM--DISEASES) (CHILDREN--DISEASES)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA G. L.

MARCHUK, G. I., PUPKO, V. Y., POGUDALINA, E. L., SMELOV, V. V., TUTERIV, I. P
PLATONOVA, S. P. and DRUZHININA, G. I.

"Nuclear Reactor Physical Problems and Calculation Methods."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DANILOVA, G.P.; DRUZHININA, I.P.; MAL'TSEV, M.V.

Investigating ternary alloys of titanium-aluminum-manganese and titanium-alluminum-iron. Izv.vys. ucheb. zav.; tsvet. met. no.3:115-121 '58. (MIRA 11:11)

1. Moskovskiy institut tsvetnykh metallov i zolota. Kafedra metallovedeniya.
(Titanium-aluminum-manganese alloys--Metallography)
(Titanium-aluminum-iron alloys--Metallography)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

SOV/149-58-6-12/19

AUTHORS: Mal'tsev, M.V., Danilova, G.P. and Druzhinina, I.P.

TITLE: Investigation of the Ternary Titanium-aluminium-niobium and Titanium-aluminium-molybdenum Alloys (Issledovaniye troynykh splavov titan-alyuminiy-niobiy i titan--alyuminiy-molibden)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, 1958, Nr 6, pp 108-114 + 1 plate (USSR)

ABSTRACT: The object of the present investigation was to study the Ti-rich alloys of the ternary Ti-Al-Nb and Ti-Al-Mo systems and to select those that by virtue of the best combination of mechanical properties (high strength and ductility) would be most suitable for manufacturing welded sheet structures designed to operate at sub-zero and elevated temperatures. In the exploratory stage, alloys containing 2-6% Al with 2-6% Mo and 2-6% Al with 1-8% Nb were studied. Magnesium reduced titanium was used in the preparation of the experimental alloys which were melted and cast in helium. The cast ingots were hot forged at 1 000 - 800 °C, to produce square rods from which test pieces for mechanical tests and metallographic examination were prepared. After it had been established that the

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

Investigation of the Ternary Titanium-aluminium-niobium and Titanium-aluminium-molybdenum Alloys

best combination of strength and ductility was to be found in the alloys containing 3-4% Al and 3-5% Mo or 5-6% Al and 4-5% Nb (both of which consisted of two phases α and β, the A-phase predominating), further tests were conducted on alloys of these compositions prepared on an industrial scale. Ingots (330 mm dia, 300-400 mm high) were prepared from magnesium reduced titanium, 99.6% pure aluminium, 98.8% pure Nb powder and 99.0% pure Mo powder by melting in vacuo, in an electric-arc furnace using a consumable electrode. Chemical analysis of samples taken from the top and bottom parts of the ingots showed that no segregation had occurred (Table 1). To determine the optimum hot working temperature, the mechanical properties and the microstructure of materials forged at various temperatures were examined. The results are given in Table 1 under the following headings: 1) Nominal composition of the alloy; 2) Part of the ingot from which the samples were taken (top, bottom); 3) Chemical composition - a) alloying elements, b) impurities; 4) Hot-forging temperature;

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Investigation of the Ternary Titanium-aluminium-niobium and Titanium-aluminium-molybdenum Alloys

5) Mechanical properties - a) U.T.S. kg/mm^2, b) yield point kg/mm^2, c) elastic limit, kg/mm^2, d) elongation, %, e) reduction of area, %, f) impact strength, kgm/cm^2. It was found that higher ductility and impact strength were obtained when forging was carried out at 1 000 - 800 °C and the harmful effect of employing higher forging temperatures was attributed to the excessive growth of the β-phase which, on decomposing, produced coarse, needle-like constituents. The microstructures of the 4% Al, 3% Mo alloy hot-forged at i) 1100 - 900 °C and ii) 1 000 - 800 °C are shown in Figure 1. In view of these results, in all subsequent work the investigated alloys were forged within the 1 000 - 800 °C temperature range. A continuous oil-fired furnace was used for pre-heating, the heating cycle consisting of 2 hours at 800 °C, followed by slow heating to 1 000 °C. The ingots, cut into several parts, were forged to produce either rods or flat stock. The latter was then hot-rolled at 1 000 - 800 °C to sheet measuring 3 x 700 x 2 000 mm, 90% reduction in thickness being

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Investigation of the Ternary Titanium-aluminium-niobium and Titanium-aluminium-molybdenum Alloys

attained without intermediate re-heating. The hot-rolled sheet was annealed at 800 °C for 20 min and de-scaled (at 500 °C) in a salt bath consisting of 80% NaOH and 20% $NaNO_3$. This treatment was followed by bright pickling in hot (70 °C) solution containing 18% H_2SO_4, 7% NaCl and 5% $NaNO_3$, after which the material was washed in running water. The following values were obtained for U.T.S. (σ_B kg/mm^2), yield point (σ_s kg/mm^2) and elongation, δ, (%) : 96, 83, 17 for the Ti-Al-Mo alloy and 86, 73, 14 for the Ti-Al-Nb alloy. In the next stage of the investigation the effect of the annealing temperature on the mechanical properties of the alloys and the temperature dependence of these properties were studied. The effect of the annealing temperature on the reduction of area ϕ (%), elongation, δ (%), U.T.S. (σ_b), yield point (σ_s) and elastic limit (σ_p) of the 4% Al, 3% Mo and 5% Al, 4% Nb

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Investigation of the Ternary Titanium-aluminium-niobium and Titanium-aluminium-molybdenum Alloys

alloys is shown in Figures 2 and 3, respectively. It is postulated that low ductility of alloys annealed at 400 - 500 °C was due to the precipitation of the hard, metastable ω phase (not visible under the microscope) formed as a result of decomposition of the β phase. The increased ductility and reduced strength of alloys annealed at higher temperatures was attributed to the formation of stable α-phase. The variation of the mechanical properties of the investigated alloys within the -196 to + 500 °C temperature range is shown in Figure 4 (5% Al, 4% Nb alloy) and Figure 5 (4% Al, 3% Mo alloy), where a_k - impact strength, kg-m/cm^2, other symbols denoting the same properties as in Figures 2 and 3. It will be seen that unlike other alloys, such as Ti-Al-Mn, Ti-Al-Fe, Ti-Al-V, etc., the two alloys under consideration are characterised by high strength and high ductility at sub-zero temperatures. Thus, at -196 °C the 5% Al, 4% Nb alloy has σ_B = 150 kg/mm^2, δ = 10%, ψ = 35% and a_k = 5 kg-m/cm^2,

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

Investigation of the Ternary Titanium-aluminium-niobium and Titanium-aluminium-molybdenum Alloys

while under the same conditions the Ti-Al-Mn and other similar alloys have δ and ψ equal to zero and very low a_k. In the final stage of the investigation, the weldability of the two alloys was studied. It was found not only that these alloys could be easily welded but also that the welded seams had good mechanical properties. Further tests revealed that the ductility of welds (measured by the angle θ through which the welded seam could be bent before the first crack appeared) could be considerably increased if small quantities of rhenium or other refractory metals were introduced in the alloys. Thus, while in the case of a weld in the 3% Al, 5% Nb alloy θ was equal to 49°, it attained the value of 112° in the same alloy containing 0.1% Re. On the basis of all the conducted tests, titanium alloys containing 3-5% Al and 4-5% Mo or 3-5% Al and 3-5% Nb can be recommended as suitable for industrial applications involving the use of welded sheet constructions.

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Investigation of the Ternary Titanium-aluminium-niobium and Titanium-aluminium-molybdenum Alloys

Acknowledgments are made to L.V. Mel'nikova, G.G. Pauler and N.S. Kaplin, who took part in all stages of the investigation, to A.I. Gribov, B.I. Shevchenko, B.S. Kulagin, B.N. Popov and A.A. Diomidova who participated in the large-scale production trials and to Candidate of Technical Sciences, M.V. Poplavko, who directed the work on weldability of the studied alloys.

There are 5 figures, 1 table and 2 Soviet references.

ASSOCIATION: Moskovskiy institut tsvetnykh metallov i zolota. Kafedra metallovedeniya. (Moscow Institute of Non-ferrous Metals and Gold. Chair of Metal Working)

SUBMITTED: June 23, 1958

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, I.P.

FEL'DMAN, M.P., doktor tekhn.nauk; DRUZHININA, I.P., kand.tekhn.nauk

Method of determining rated capacity predictability of planned hydroelectric power stations. Gidr.stroi. 27 no.3:38-45 Mr '58. (MIRA 11:4)
(Hydroelectric power stations)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, I.P.

PHASE I BOOK EXPLOITATION SOV/4508

Akademiya nauk SSSR. Institut metallurgii

Titan i yego splavy, vyp. 3: Metallovedeniye titana (Titanium and Its Alloys, No. 3: Metal Science of Titanium) Moscow, Izd-vo AN SSSR, 1960. 161 p. Errata slip inserted. 2,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova.

Resp. Ed.: N.V. Ageyev, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: N.L. Podgoyetskiy; Tech. Ed.: Ye. V. Makuni.

PURPOSE: This collection of articles is intended for scientific research workers and metallurgical engineers.

COVERAGE: The articles summarize results of experimental studies of titanium-base alloys. The microstructure and mechanical properties of titanium-base alloys containing aluminum, chromium or other metals are analyzed along with the effect of oxygen, hydrogen and heat treatment on alloy structure and properties. The tendency of titanium alloys to embrittlement as a result of strain aging is emphasized, and the nitriding of titanium, carried out to increase the surface strength and wear resistance of titanium alloys, is described. Transformations occuring in commercial titanium under conditions of electric heating are examined. Attempts to develop titanium-base alloys capable of withstanding temperatures over 400°C are discussed as are problems of titanium-powder metallurgy and weldability of certain titanium-base alloys. No personalities are mentioned. Most of the articles have bibliographic references, the majority of which are Soviet.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

Druzhinina, I.P.

PHASE I BOOK EXPLOITATION SOV/4164

Vsesoyuznoye soveshchaniye po splavam redkikh metallov, 1st, Moscow, 1957

Redkiye metally i splavy; trudy... (Rare Metals and Alloys; Transactions of the First All-Union Conference on Rare-Metal Alloys) Moscow, Metallurgizdat, 1960. 438 p. 3,150 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut metallurgii; USSR Komissiya po redkim metallam pri nauchno-tekhnicheskom komitete.

Ed.: I.I. Shapovalov; Ed. of Publishing House: O.M. Kamayeva; Tech. Ed.: P.G. Islent'yeva.

PURPOSE: This collection of articles is intended for metallurgical engineers, physicists, and workers in the machine-building and radio-engineering industries. It may also be used by students of schools of higher education.

COVERAGE: The collection contains technical papers which were presented and discussed at the First All-Union Conference on Rare-Metal Alloys, held in the Institute of Metallurgy, Academy of Sciences USSR in November 1957. Results of investigations of rare-metal alloys, titanium, and copper-base alloys with additions of rare metals are presented and discussed along with investigations of rhenium, vanadium, niobium, and their alloys. The effect of rare-earth metals on properties of magnesium alloys and steels is analyzed. The uses of rhenium as a dehydrating catalyst, electroplating material, and material suitable for making plugs for automobile electrical systems are discussed. Also, the effect of the addition of certain elements on the properties of heat-resistant steel is examined and alloys with special physical properties (particularly semiconductive alloys) are discussed. No personalities are mentioned. Soviet and non-Soviet references accompany some of the articles.

PART II. TITANIUM, AND COPPER-BASE ALLOYS WITH RARE-METAL ADDITIONS

Rare Metals (Cont.) SOV/4164

PART III. RHENIUM, VANADIUM, NIOBIUM, ZIRCONIUM AND ALLOYS BASED ON THEM

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DANILOVA, G.P., DRUZHININA, I.P., MAL'TSEV, M.V.

Investigating the effect of heat treatment on the mechanical properties of titanium alloys. Titan i ego splavy no.3:52-57 '60.
(MIRA 13:7)
(Titanium alloys--Heat treatment)

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L 41706-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6019578 IJP(c) JD/WW/JG SOURCE CODE: UR/0115/66/000/004/0048/0050

AUTHOR: Druzhinina, I. P.; Vladimirskaya, T. M.; Fraktovnikova, A. A.

ORG: none

TITLE: Thermoelectric properties of certain refractory metals

SOURCE: Izmeritel'naya tekhnika, no. 4, 1966, 48-50

TOPIC TAGS: refractory metal, thermoelectric property, thermocouple, temperature dependence, thermal emf, tantalum, zirconium, niobium

ABSTRACT: Since refractory metals constitute the basic component of high temperature thermocouples (>1300C), the authors have investigated the thermoelectric properties of Ta, Zr, and Nb of varying degree of purity and measured the temperature dependence of their thermal emf when coupled with platinum. The tests were made on wires drawn from rods forged (at varying temperatures) from arc-molten ingots. The integral emf was determined by calibration of thermocouples (with Pt) in vacuum and in inert-gas atmospheres. The thermal emf was measured by a null method with a potentiometer. The results show that the thermocouples have more stable characteristics in vacuum than in gas (Ar). The measured temperature dependence can be analytically approximated by means of a second-order equation $E = A + Bt + Ct^2$, and the values of A, B, and C are tabulated for Ta, Nb, and Zr. The integral emf of Ta-Pt and Nb-Pt thermocouples is 33 and 28 mv at 1636 and 1515C, respectively, and that of Zr-Pt is 25 mv at 1437C. Zr is not suitable for use below 440C because of a change in its properties. The

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L 41706-66

ACC NR: AP6019578

plots of the absolute differential emf vs. temperature for Ta and Nb are smooth curves, but the plot for Zr shows a reversal corresponding to the change of properties below 440C. Orig. art. has: 3 figures, 2 formulas and 3 tables.

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Card 2/2

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, K. V.

"Chemical Modifications of Grafting in Plants of the Nicotiana Genus," Sub. 26 Feb 47, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Dissertations presented for degrees in science and engineering in Moscow in 1947.

SO: Sum.No.457, 18 Apr 55

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, K. V., KRITZMAN, M. G. and SAMARINA, O. P.
The enzymatic oxidation of aspartic acid

Paragraph 1815 Biochimia (USSR) 1948, 13/6 (538-545) Graphs 5 Tables 5
An enzyme catalysing the oxidation and decarboxylation of L-aspartic acid and the method for isolating and purifying this enzyme are described. It is demonstrated that coenzyme is required for the action. The pH optimum lies at 7.5. The oxidation of aspartic acid is not accompanied by accumulation of ammonia or x-keto acid or by the formation of amide nitrogen.

Under aerobic conditions and after about 3 hours' incubation the loss of added aspartic acid amounts to 10-20% /o. This corresponds to an equivalent amount of CO2 formed. Under anaerobic conditions no loss of aspartic acid and no formation of CO_2 are observed. Hydroxylamine and iodoacetic acid in concentrations of 10^{-2} and 10^{-3} inhibit the consumption of oxygen by 50- 80%/o. Cyanide in a concentration of 10^{-2} inhibits the consumption of oxygen and the production of CO2 by about 50o/o.

SO: Section II Vol. 3 No. 1-6

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA K.V. and KRITZMAN M.G.

5604. KRITZMAN M.G. and DRUZHININA K.V. Mechanism of synthesis of amino-acids in the liver Doklady Akademii Nauk S.S.S.R., Moscow 1949, 67/4 (569-572) Table 1 Issus. 1

Under anaerobic conditions, rat liver homogenate synthesizes alanine equally well from either lactic or pyruvic acids. Similarly, either hydroxy- or ketoglutaric acid can give rise to glutamic acid. Thus, there are probably several different paths for synthesis of amino-acids in the organism. Leicester - San Francisco

SO: EXCERPTA MEDICA Section II Vol III No 10

Inst. Biological and Medical Chemistry, AMS USSR

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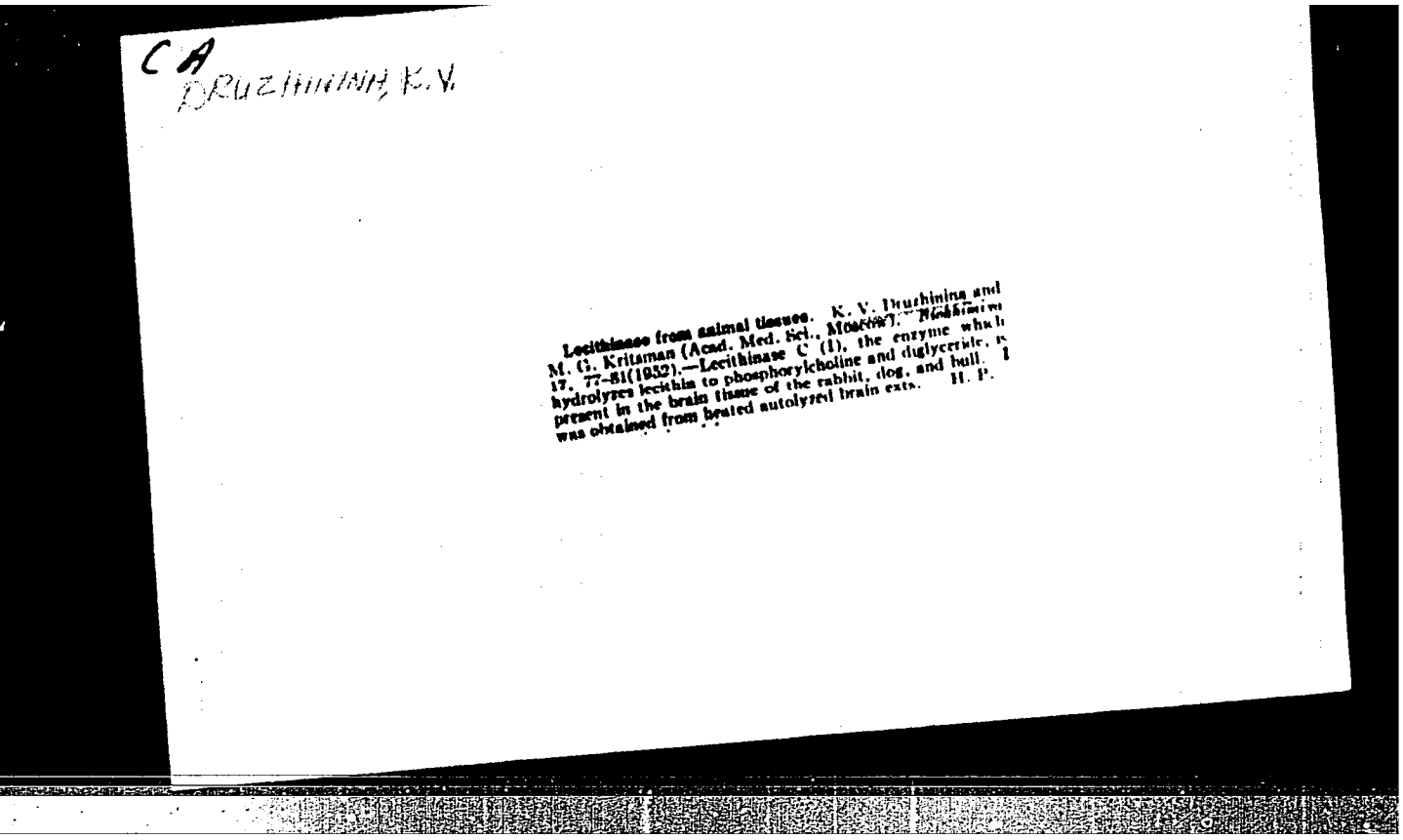

CA
DRUZHININA, K.V.

Lecithinase from animal tissues. K. V. Druzhinina and M. G. Kritaman (Acad. Med. Sci., Moscow). Biokhimiya 17, 77–81(1952).—Lecithinase C (I), the enzyme which hydrolyzes lecithin to phosphorylcholine and diglyceride, is present in the brain tissue of the rabbit, dog, and bull. I was obtained from heated autolyzed brain extr. H. P.

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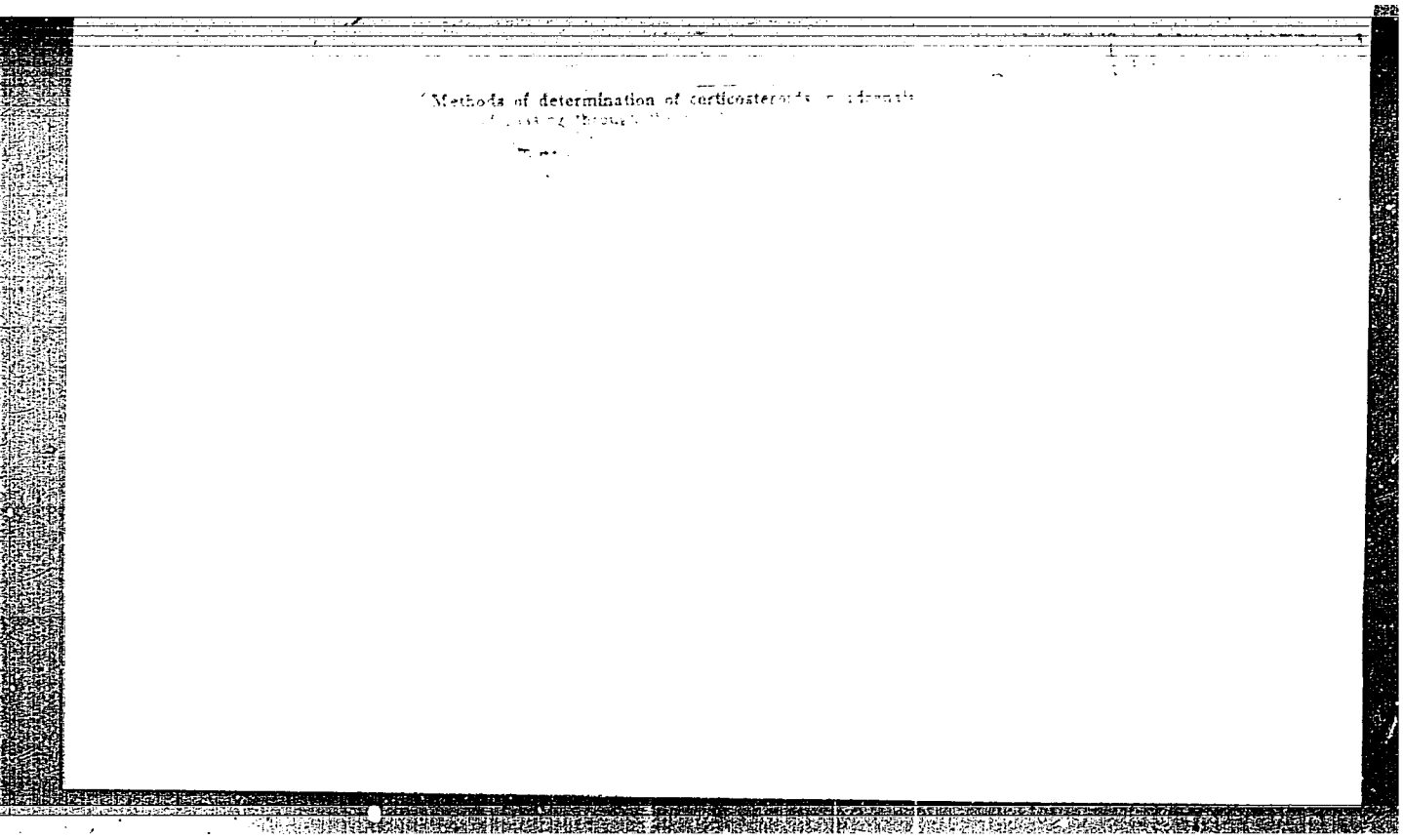

Methods of determination of corticosteroids in urine

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

YUDAYEV, N.A.; DRUZHININA, K.V.

Corticosteroid content in the suprarenal glands in cattle of various age group. Vop.med. khim. 2 no.4:255-261 Jl-Ag '56. (MLRA 9:10)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR, Moskva.
(ADRENAL CORTEX HORMONES, determination,
in cattle adrenals in various age groups (Rus))

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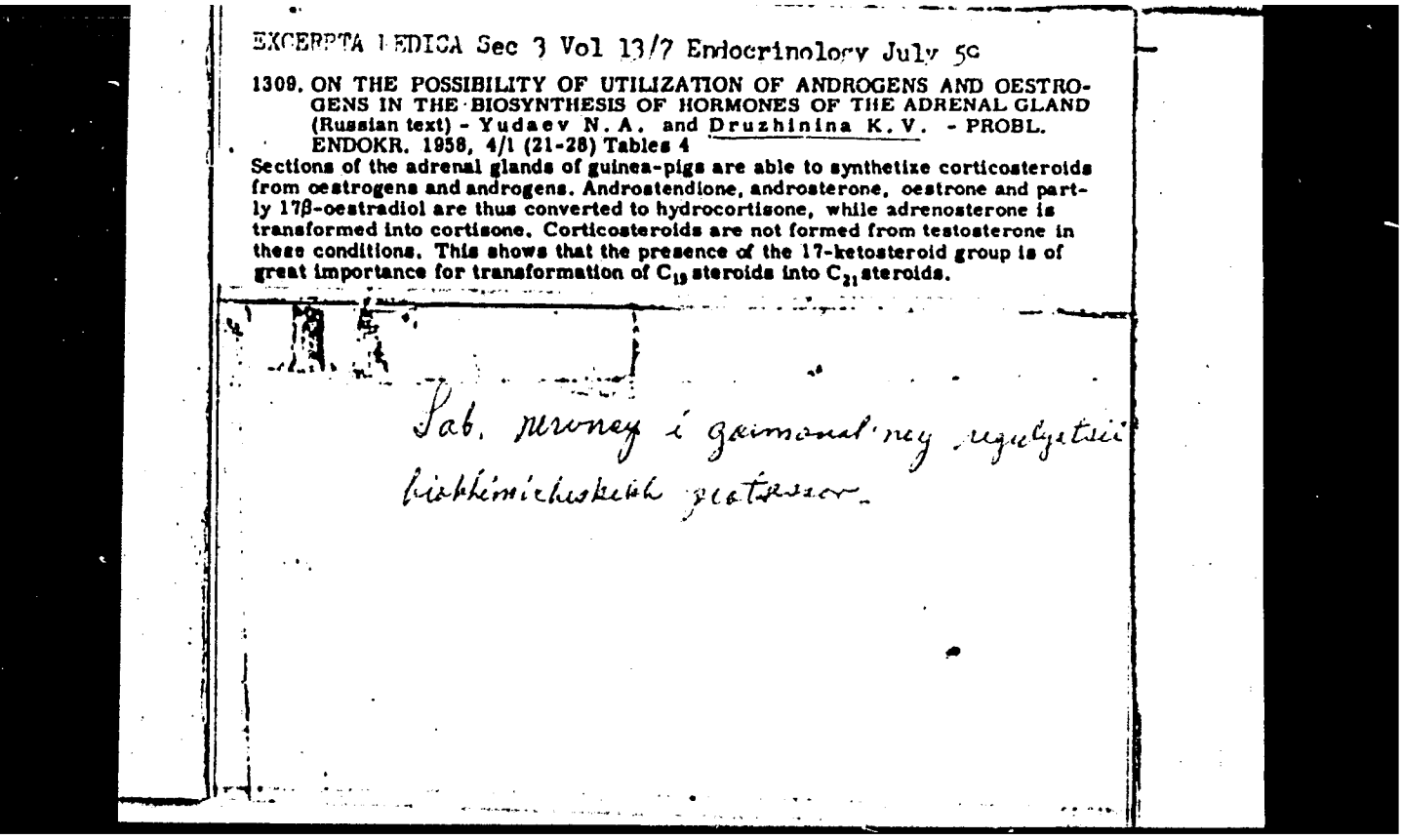

EXCERPTA MEDICA Sec 3 Vol 13/7 Endocrinology July 59

1309. ON THE POSSIBILITY OF UTILIZATION OF ANDROGENS AND OESTROGENS IN THE BIOSYNTHESIS OF HORMONES OF THE ADRENAL GLAND (Russian text) - Yudaev N. A. and Druzhinina K. V. - PROBL. ENDOKR. 1958, 4/1 (21-28) Tables 4

Sections of the adrenal glands of guinea-pigs are able to synthetize corticosteroids from oestrogens and androgens. Androstendione, androsterone, oestrone and partly 17β-oestradiol are thus converted to hydrocortisone, while adrenosterone is transformed into cortisone. Corticosteroids are not formed from testosterone in these conditions. This shows that the presence of the 17-ketosteroid group is of great importance for transformation of C_{19} steroids into C_{21} steroids.

Lab. nervnoy i gumoral'noy regulyatsii biokhimicheskikh protsessov

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, K.V. (Moscow)

Synthesis of corticosteroids in the adrenal glands of embryos [with summary in English]. Probl.endok. i gorm. 4 no.2:23-25 Mr-Ap '58 (MIRA 11:5)

1. Iz laboratorii nervnoy i gormonal'noy regulyatsii biokhimicheskikh protsessov (zav. - prof. N.A. Yudayev) instituta biologicheskoy i meditsinskoy khimii AMN SSSR (dir. - prof. V.N. Orekhovich)

(ADRENAL CORTEX HORMONES, metabolism
synthesis in adrenal glands in embryo cattle & pig (Rus))
(ADRENAL GLANDS, physiology
hormone synthesis in embryo cattle & pig (Rus))

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

AFIGENOVA, S.A.; DRUZHININA, K.V.; KREKHOVA, M.A., PANKOV, Yu.A., RODINA, A.I. YUDAYEV, N.A. (Moskva)

Biosynthesis of corticosteroids by adrenal sections of various animals. [with summary in English]. Probl.endok., i gorm. 4 no.3:3-11 My-Je '58 (MIRA 11:8)

1. Iz laboratorii nervnoy i gormonal'noy regulyatsii biokhimicheskikh protsessor (zav. - prof. N.A. Yudayev) Instituta biologicheskoy i meditsinskoy khimii AMN SSSR (dir. prof. V.N. Orekhovich).

(ADRENAL CORTEX HORMONES, metabolism
synthesis in adrenal slices of various animals (Rus))

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

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AFINOGENOVA, S.A.; DRUZHININA, K.V.; PANKOV, Yu.A.; RAZINA, L.G.; KREKHOVA, M.A.

Conference on the biochemistry of corticosteroids and their use in clinical practice. Vop.med.khim. 5 no.5:393-397 S-O '59. (MIRA 13:2)

(STEROIDS)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, K. V., YUDAYEV, N. A. (USSR)

"Cortisone Formation in Presence of -Androsten-3,11,17-trione in vitro."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, K.V.

Chromatographic separation of urinary corticosteroids on a thin layer of KSK-2 silica gel. Vop. med. khim. 11 no.4:81-88 Jl-Ag '65. (MIRA 18:8)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR, Moskva.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, K.V.

In vitro dehydrogenation of 11-β-hydroxy corticosteroids in the presence of aurenosterone. Biokhimiia 30 no.1:81-87 Ja-F '65. (MIRA 18:6)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR, Moskva.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DIKKER, G.L.; DRUZHININA, L.N., kand. tekhn. nauk, dots.; ISKENDEROV, A.A., kand. tekhn. nauk, dots.; KLYUYEVA, T.K., kand. tekhn. nauk, dots.; LOGOTKIN, I.S., kand. tekhn. nauk; MEL'MAN, M.Ye., kand. tekhn. nauk, dots.; MISNIK, I.A., kand. tekhn. nauk; RUSH, V.A., dots.; RUKOSUYEVA, A.N., dots., red.; KAFKA, B.V., prof., retsenzent; FERTMAN, G.I., dots., retsenzent; SOBOLEVA, M.I., dots., retsenzent; BUDNITSKAYA, R.S., kand. tekhn. nauk, retsenzent; VOLKOV, Ye.N., kand. tekhn. nauk, retsenzent; AREF'YEV, I.I., inzh., retsenzent; KHARITONOV, A.F., retsenzent; GUREVICH-GUR'YEV, Ye.S., retsenzent; KUZ'MINSKIY, M.M., retsenzent; INIKHOV, G.S., prof., retsenzent; KHOMUTOV, B.I., dots., retsenzent; BORODINA, Z.N., dots., retsenzent; BORISOVA, G.A., red.; MEDRISH, D.M., tekhn. red.

[Starch, sugar, honey, confectionery products, condiments, fats, milk, and milk products] Khrakhmal, sakhar, med, konditerskie, vkusovye tovary, zhiry, moloko i molochnye produkty. Moskva, Gos. izd-vo torg. lit-ry, 1961. 750 p. (MIRA 14:7)

(Food industry)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

BOGACHEV, I.N.; DRUZHININA, L.P.

Graphitization of cementite. Trudy Ural. politekh. inst. no.68:34-37 '58. (MIRA 12:7)

(Cast iron--Heat treatment)
(Cementite) (Phase rule and equilibrium)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, L.S.

Methodology for determining hysteresis loops on disc-shaped specimens. Izv. vys. ucheb. zav.; fiz. 8 no.2:100-105 '65. (MIRA 18:7)

1. Sverdlovskiy gornyy institut imeni Vakhrusheva.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, L.V., red.

[Feeding and nutrition of young children] Vskarmlivanie i pitanie detei rannego vozrasta. Moskva, Meditsina, 1965. 55 p. (MIRA 18:8)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, L.I.

Storage of sugar beets at the Zemtchino Sugar Refinery. Sakh. prom. 31 no.6:23-24 Je '57. (MLRA 10:6)

1. Zamotchinskiy sakharnyy zavod.
(Sugar beets--Storage)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, M.I.

Experience in the storage of pitted sugar beets. Sakh.prom. 37 no.7:55-56 Jl '63. (MIRA 16:7)

1. Zemetchinskiy sakharnyy zavod.
(Sugar beets--Storage)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, M.M. [Druzhynina, M.M.]

Kohlrabi as a valuable food and forage plant. Visnyk Bot.sada AN URSR no.1:32-34 '59. (MIRA 13:8)
(Cabbage)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, M.M. [Druzhynina, M.M.]

Collection of peppers at the Botanical Garden of the Academy of Sciences of the Ukrainian S.S.R. Visnyk Bot. sada AN URSR no. 2:24-26 '60. (MIRA 14:4)
(Kiev--Pepper--Varieties)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, M.N.

Experiment in the cultivation of chufa in Kiev. Trudy Bot.sada AN URSR 3:100-105 '55. (MLRA 10:8

(Kiev--Chufa)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

ANDRIANOV, V.N., prof.; DRUZHININA, N.A., assistent; MISHARINA, Ye.A., kand.tekhn.nauk; NIKONOV, [illegible]., dotsent; SHPRINK, B.E., prof., retsenzent; GLEBOVICH, A.A., kand.tekhn.nauk; GIL'MAN, Ye.A., red.; VOZNESENSKIY, A.D., tekhn.red.

[Electric machines; instructions and assignments for students specializing in the electrification of agriculture] Elektricheskie mashiny; metodicheskie ukazaniia i kontrol'nye zadaniia dlia studentov spetsial'nosti "elektrifikatsiia sel'skokhoziastvennogo proizvodstva." Pod red. V.N.Andrianova i A.A.Glebovicha. Moskva, Mosk. in-t mekhanizatsii i elektrifikatsii sel'.khoz., 1958. 56 p. (MIRA 12:2)

(Electric machinery)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

ANDRIANOV, Viktor Nikolayevich, prof.; BYSTRITSKIY, D.N.; VOROPAYEV, N.I.; DRUZHININA, N.A.; MISHARINA, Ye.A.; NIKONOV, L.V.; NIKITINA, V.M., red.; PROKOF'YEVA, L.N., tekhn.red.

[Practical studies of electric machinery in laboratories] Laboratorno-prakticheskie zaniatiia po elektricheskim mashinam. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 250 p. (MIRA 13:6)
(Electric machinery--Study and teaching)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

VOROPAYEV, N.I., inzh.; DRUZHININA, N.A.

Pulse regulation of the angular velocity of asynchronous motors. Mekh. i elek. sots. sel'khoz. 20 no.3:45-46 '62. (MIRA 15:7)

1. Moskovskaya sel'skokhozyaystvennaya akademiya imeni K.A. Timiryazeva.

(Electric driving)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

VOROPAYEV, N.I., assistent; DRUZHININA, M.A., assistent

Equipment for measuring the angle θ of a synchronous machine. (MIRA 15:12)
Izv.TSKHA no.4:233-235 '62.
(Electric machinery, Synchronous)
(Electric measurements)

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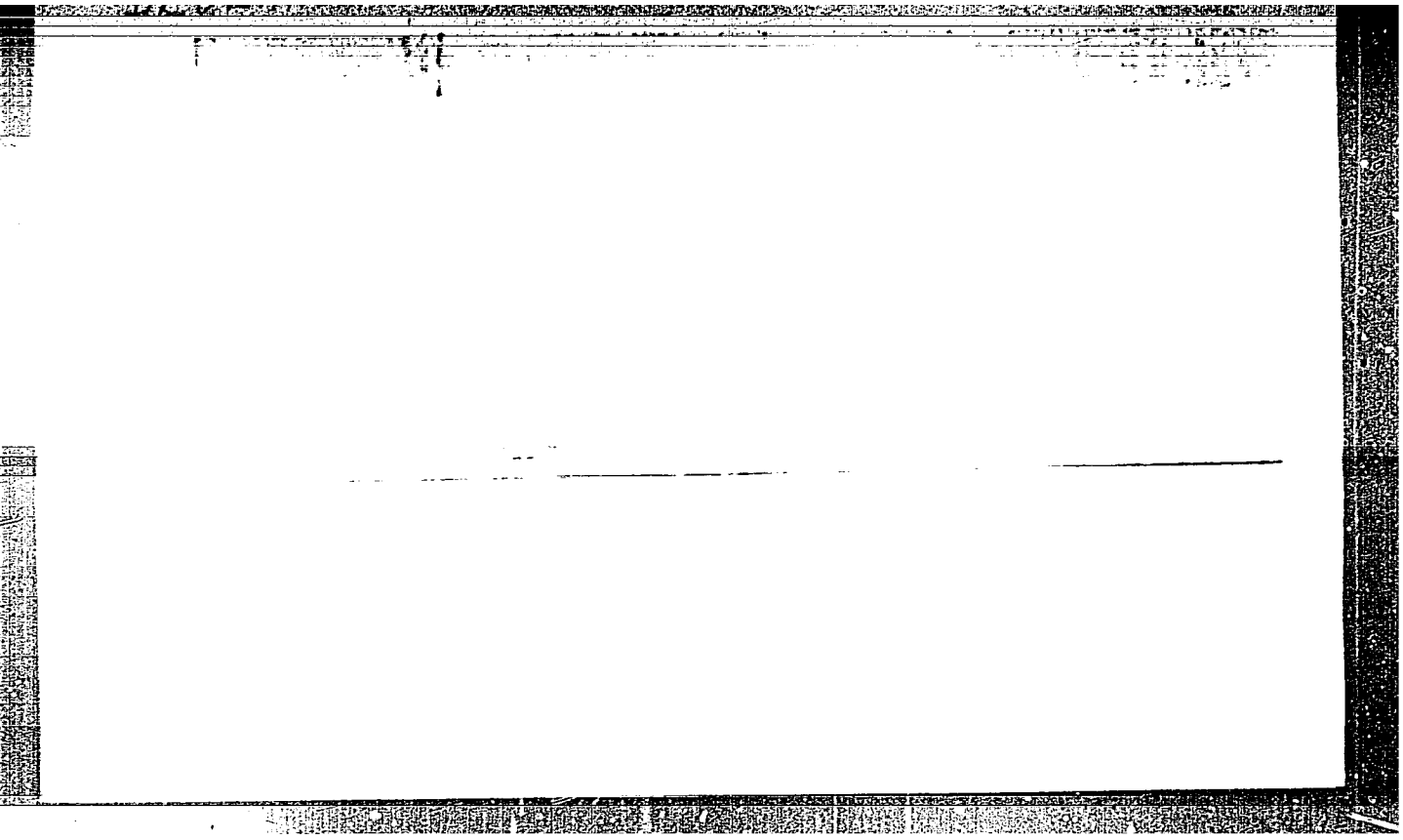

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, N.K.

Solubility of diaspore in solutions of aluminates. TSvet.met. 28 no.1:54-56 Ja-F '55. (MIRA 10:10)

1. Vsesoyuznyy alyuminiyevo-magniyevyy institut.
(Diaspore) (Aluminates)

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137-58-6-11916

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 105 (USSR)

AUTHOR: Druzhinina, N.K.

TITLE: The Role of Lime in the Leaching of Bauxites (Rol' izvesti v protsesse vyshchelachivaniya boksi...)

PERIODICAL: Tr. Vses. alyumin.-magn. in-ta, 1957, Nr 39, pp 62-71

ABSTRACT: The results of experiments to clarify the effect of the addition of CaO in the leaching of diaspore bauxites are set forth. The favorable influence of CaO on the process of leaching diaspore bauxites is related to the presence therein of minerals such as Ti that impede the solution of $Al(OH)_3$. In such event the addition of CaO sharply reduces the parasitic action of the Ti. However, if CaO is present to excess, losses of Al_2O_3 in subsequent conversions may occur owing to the formation of Ca aluminates. To discover the mechanism of action of TiO_2 and CaO on the process of solution of $Al(OH)_3$, their behavior in aluminate solutions is investigated. Prolonged heating of TiO_2 with aluminate solution causes it to go into a colloidal state. However, in the presence of CaO the formation of a bulky precipitate begins. This gradually converts to crystals of the cubic form of perovskite ($CaO \cdot TiO_2$). 1. Aluminum ores--Processing 2. Calcium oxide --Applications 3. Calcium oxide--Performance

A.P.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, N.K.

S/180/60/000/02/028/028
E071/E135

AUTHOR: Ogurtsov, S.V.

TITLE: Scientific Conference on the Metallurgy, Chemistry and Electrochemistry of Titanium

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1960, Nr 2, pp 167-168 (USSR)

ABSTRACT: The conference took place on January 14-20 1960 in Moscow in the Institute of Metallurgy, Academy of Sciences, USSR. It was organised by the Committee for Coordination of Scientific Research on Titanium. About 400 representatives of academic and research institutions and works participated in the conference. The conference was divided into four sections: 1) raw materials and smelting of ores; 2) chemical technology and chlorination; 3) metallothermic methods of smelting titanium; and 4) electrolysis. The following papers were read:
Metallurgical evaluation of some new deposits (B.B. Dmitrovskiy); State and prospects of improving the technology of smelting of ilminite concentrates (V.A. Reznichenko and I.I. Solov'yev);

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Thermodynamic investigations of titanium compounds (F.B. Khalimov and V.A. Reznichenko); An investigation of the process of reduction of iron-titanium concentrates with carbon (M.B. Rapoport); Some hydrodynamic and kinetic features of the process of chlorination of titanium dioxide in molten chlorides (Kim Men-rin); Oxidation of titanium tetrachloride with oxygen (G.S. Moynov, B.N. Melent'yev, V.A. Reznichenko); Utilisation of ilminite concentrates for the production of titanium dioxide pigment by the sulphuric acid method (M.L. Borodina, S.B. Shaygevich, N.A. Gubarova); An investigation of some properties of the system $TiCl_4 - AlCl_3 - FeCl_3$ (N.K. Druzhinina); An Investigation of phase equilibria liquid-vapour in systems formed by titanium tetrachloride with chloroanhydrides of mono- and tri-chloroacidic acids (G.V. Seryakov, S.A. Vaks, L.S. Sidorina); Determination of the summary content of carbon in titanium tetrachloride (G.V. Seryakov, S.A. Vaks, I.M. Golovanov); Basic conditions for standardised

Card 2/3

results of the process of production of titanium by the magnesium thermite method (S.V. Ogurtsov, V.A. Reznichenko, V.K. Ustinov, V.I. Kozhevnikov, A.I. Dedkov); On the two stage method of production of titanium by the sodium thermite method (V.A. Reznichenko, S.V. Ogurtsov); Production of a high purity titanium (V.I. Batashev); The influence of the content of chlorine in a high purity titanium sponge on the process of smelting and on the quality of the metal produced (G.M. Vaynshteyn); The production of titanium and its alloys by refining of black anodes (Academician I.P. Bardin, A.D. Pirogov, V.I. Lukashin); On the theory of refining of titanium (V.A. Sukhodskiy); Production of titanium by electrolysis of titanium dioxide in fluoride-chloride melts (I.P. Bardin, A.A. Kazayn); Electrolytic production of titanium from chloride-fluoride melts (V.M. Ioffe, E.N. Rozanov, N.A. Lyubimova); Electrolytic refining of titanium waste products (V.M. Lozovatskiy); and a number of other reports.
There are no figures, tables or references.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, N.K.

Investigating certain properties of the system $TiCl_4$ - $AlCl_3$ - $FeCl_3$. Titan i ego splavy no.5:225-232 '61. (MIRA 15:2)

(Systems (Chemistry))
(Solubility)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

BELETSKIY, M.S.; DRUZHININA, N.K.; YANKOVSKAYA, V.G.

Spectrochemical determination of aluminum in titanium tetrachloride. Titan i ego splavy no.8:247-250 '62. (MIRA 16:1)
(Titanium chloride--Analysis) (Aluminum--Spectra)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

VOLYNSKIY, N.P.; DRUZHININA, N.K.

Conversion of thiosulfuric acid to pentathionic acid in the presence of diisoamyl B-alkoxyrethyl ammonium ions. Zhur. ob. khim. 35 no.3:469-471 Mr '65. (MIRA 18:4)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

VOLYNSKIY, N.P.; DRUZHININA, N.K.

Synthesis of diisoamyl-B-alkoxyethylamines. Zhur.org.khim. 1 no.3:489-491 Mr '65. (MIRA 18:4)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

PANIN, V.V.; KLYUYEV, M.M.; TOPILIN, V.V.; DRUZHININA, N.P.

Investigating temperature fields in electric slag ingots.
Izv. vys. ucheb. zav.; chern. met. 6 no.9:77-82 '63.(MIRA 16:11)

1. Zavod "Elektrostal'".

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

KLYUYEV, M.M.; TOPILIN, V.V.; ROZANOV, D.P.; DRUZHININA, N.P.; PUPYNINA, S.M.

Deoxidation of slag during electric slag melting. Avtom. svar. 17 no.9:55-60 S '64. (MIRA 17:10)

1. Elektrometallurgicheskiy zavod "Elektrostal'".

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, N.P.

Reliability of estimating the productivity of individual species of the grass cover of physicogeographical steppe facies. Dokl. Inst. geog. Sib. i Dal'. Vost. no.3:43-49 '63. (MIRA 18:12)

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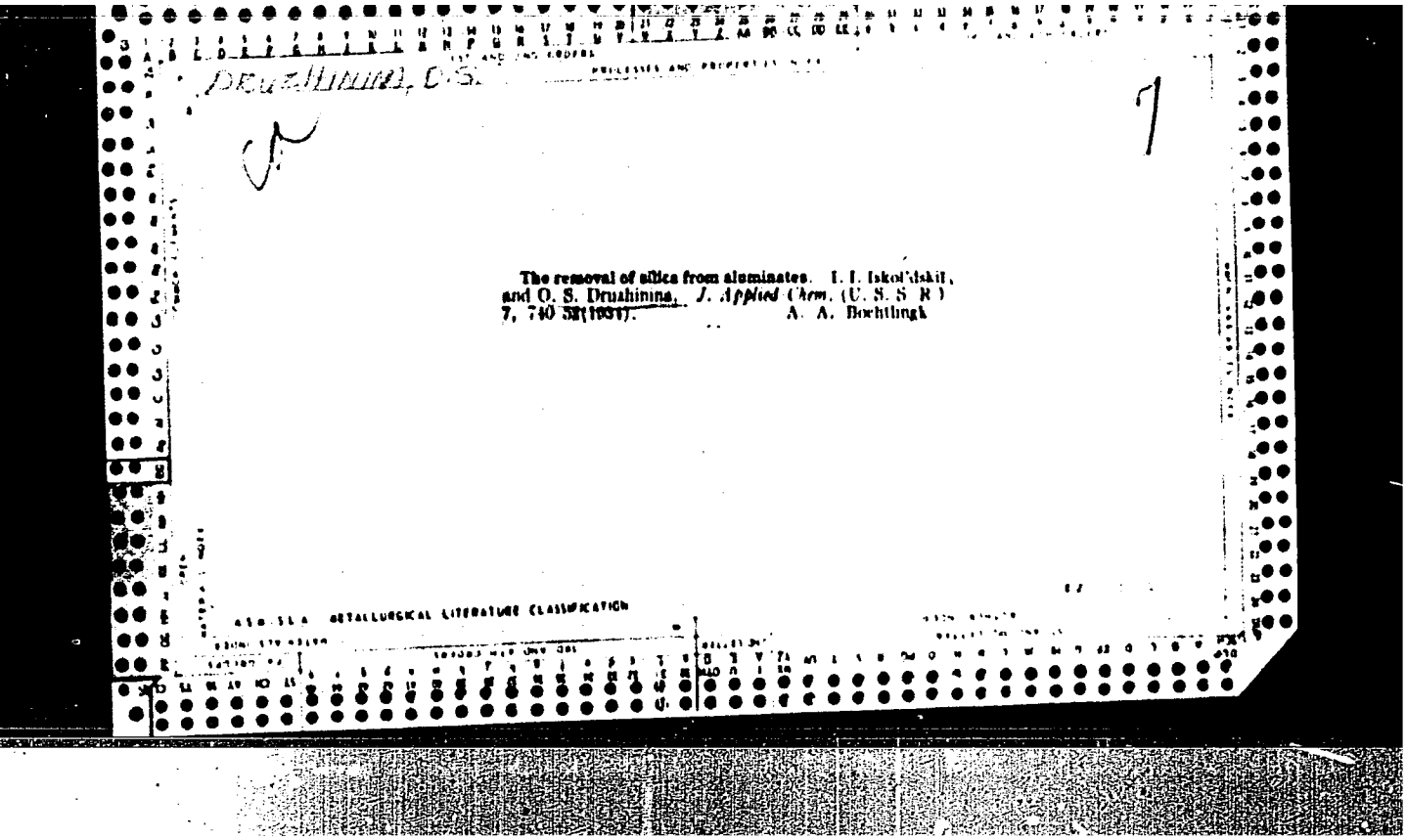

DRUZHININ, O.S.

7

The removal of silica from aluminates. I. I. Iskol'dskii, and O. S. Druzhinina. *J. Applied Chem.* (U. S. S. R.) 7, 740-52(1934). A. A. Boehringk

A10-51A METALLURGICAL LITERATURE CLASSIFICATION

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DRUZHININA, O. S.

BC

17-1

PROCESSES AND PROPERTIES INDEX

Decomposition potential of sodium pyrophosphate and niobium pentoxide dissolved in molten phosphate. S. I. Beliarenko and O. S. Dergunova (J. Appl. Chem. Russ., 1940, 13, 163—165).—The decomp. potential of $Na_4P_2O_7$ at 1010° is 0·71 v. (temp. coeff. −0·00167 v. per degree); substantially identical results are obtained with 1 : 2 $Na_4P_2O_7$–NaCl and 1 : 2 : 0·2—1·5 $Na_4P_2O_7$–NaCl–Nb_2O_5 mixtures. The anode process is: $P_2O_7'''' \rightarrow P_2O_5 + O_2$; $P_2O_5 + Na_4P_2O_7 \rightarrow 4NaPO_3$, and the cathode process is $Na^{\cdot} \rightarrow Na$; $10Na + Nb_2O_5 \rightarrow 5Na_2O + 2Nb$; $Na_2O + 2Na_4P_2O_7 \rightarrow 2Na_3PO_4$.
R. T.

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

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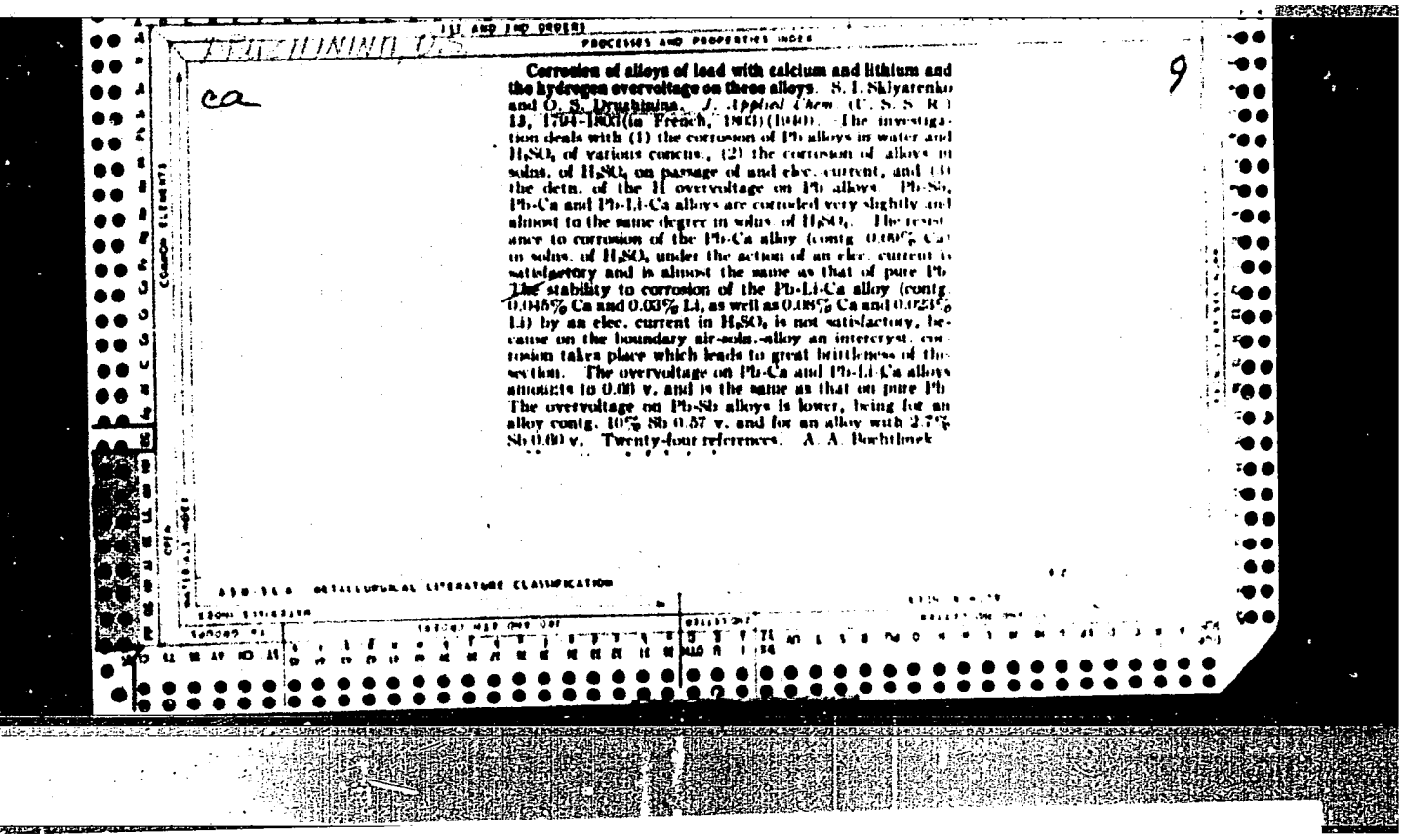

Corrosion of alloys of lead with calcium and lithium and the hydrogen overvoltage on these alloys. S. I. Shlyarenko and O. S. Druzhinina. *J. Applied Chem.* (U. S. S. R.) 13, 1701-1801 (in French, 1803) (1940). The investigation deals with (1) the corrosion of Pb alloys in water and H_2SO_4 of various concns., (2) the corrosion of alloys in solns. of H_2SO_4 on passage of and elec. current, and (3) the detn. of the H overvoltage on Pb alloys. Pb-Sb, Pb-Ca and Pb-Li-Ca alloys are corroded very slightly and almost to the same degree in solns of H_2SO_4. The resistance to corrosion of the Pb-Ca alloy (contg. 0.08% Ca) in solns. of H_2SO_4 under the action of an elec. current is satisfactory and is almost the same as that of pure Pb. The stability to corrosion of the Pb-Li-Ca alloy (contg. 0.045% Ca and 0.03% Li, as well as 0.08% Ca and 0.02% Li) by an elec. current in H_2SO_4 is not satisfactory, because on the boundary air-soln.-alloy an intercryst. corrosion takes place which leads to great brittleness of the section. The overvoltage on Pb-Ca and Pb-Li-Ca alloys amounts to 0.60 v. and is the same as that on pure Pb. The overvoltage on Pb-Sb alloys is lower, being for an alloy contg. 10% Sb 0.57 v. and for an alloy with 2.7% Sb 0.60 v. Twenty-four references. A. A. Berlinck

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, T. A.:
Min Health USSR. Central Inst for the advanced Training of Physicians.

DRUZHININA, T. A.: "The clinical aspects of the catatonic form of schizophrenia." Min Health USSR. Central Inst for the Advanced Training of Physicians. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Sciences)

SO: Knizhnaya Letopis', No. 20 1956.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

SEVERIN, S.Ye.; TSEYTLIN, L.A.; DRUZHININA, T.N.

Enzymatic breakdown of diphosphopyridine nucleotide in the homogenates of cardiac and skeletal musculature. Biokhimiia 28 no.1:145-151 Ja-F '63. (MIRA 16:4)

1. Laboratory of Biochemistry, Institute of Pharmacology and Chemotherapy, Academy of Medical Sciences, Moscow.
(CODEHYDROGENASE) (MUSCLE)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

DRUZHININA, T.N.; NOVIKOVA, M.A.; ZHDANOV, G.L.

Analogs of uridine diphosphoglucose in the reaction with uridine diphosphoglucose-4-epimerase. Dokl. AN SSSR 164 no.5:1175-1178 O '65. (MIRA 18:10)

1. Institut khimii prirodnykh soyedineniy AN SSSR. Submitted December 17, 1964.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411310011-9

AUTHORS: Rogovin, Z. A., Druzhinina, T. V. SOV/156-58-1-34/46

TITLE: On the Determination of the Poly-Dispersion of the Stereo-Regular Polypropylene (Ob opredelenii polidispersnosti stereo-regulyarnogo polipropilena) 8th Communication of the Series "Investigations in the Field of Production of New Types of Carbo-Chain-Like Fibers" (8-ye soobshcheniye iz serii: "Issledovaniya v oblasti polucheniya novykh tipov karbotsepnykh volokon")

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 1, pp. 139 - 142 (USSR)

ABSTRACT: The working out of the method of production of stereo-regular (isotactical) poly-olefines (Ref 1) and their use for the manufacture of products of high quality especially of solid synthetic fibers of poly-propylene (Ref 2) is one of the most important achievements in the modern synthetic chemistry of polymers. Recently, a number of articles have been published related to this subject (Ref 3). As yet, however, no method is known for determining the property referred to in the title. Poly-dispersion (polidispersnost') is of greatest importance for various classes of polymers, especially for the production

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On the Determination of the Poly-Dispersion of the Stereo-Regular Polypropylene. 8th Communication of the Series "Investigations in the Field of Production of New Types of Carbo-Chain-Like Fibers" SOV/156-58-1-34/46

of synthetic fibers. The authors worked out a method of fractionation of both the amorphous and crystalline fraction of polypropylene which allows a separated determination of the poly-dispersion of the two fractions. The poly-propylene-preparations were synthetized by B.A.Krentsel' in the Laboratory of A.V.Topchiyev. An experimental part in which T.A.Akšenova took part, follows. It appears from the results (Table 1) that the investigated preparations of the amorphous polypropylene show a considerable poly-dispersion. Even with a separation of these preparations into 4 to 6 fractions the molecular weights differ by a factor of 10 - 12, for individual portions even by a factor of 20. The determination of the poly-dispersion of the crystalline poly-propylene by fractionized sedimentation meets with considerable experimental difficulties. In order to overcome these obstacles, the crystalline poly-propylene was fractionized by means of successive dissolution at different temperatures. This has been achieved by a treatment with white spirit (uayt-spirit)(fraction with a boiling temperature of from 170 to 180° at steadily increasing temperatures

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(20 to 100°). The solution was decanted after each treatment and the deposit was treated with the previous solvent, but at a higher temperature. From 6 to 7 fractions were obtained in this way. Table 2 shows some results obtained by this method. It hence results that the poly-dispersion of the crystalline poly-propylene-preparations is smaller than that of the amorphous one. The solubility of the individual poly-propylene-fractions in organic solvents does not only depend on their molecular weight, but also on the structure of the macro-molecules and on the structure of the polymer. There are 2 tables and 4 references.

ASSOCIATION: Kafedra iskusstvennogo volokna Moskovskogo tekstil'nogo instituta (Chair of Synthetic Fiber at the Moscow Textile Institute)

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15(9) SOV/64-59-4-6/27

AUTHORS: Rogovin, Z. A., Druzhinina, T. V.

TITLE: Investigations of the Thermostability of the Stereoregular Polypropylene (Issledovaniye termostoykosti stereoregulyarnogo polipropilena)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 4, pp 24 - 26 (USSR)

ABSTRACT: The thermostability (Ts) of the polymers (P) is characterized by irreversible changes of the (P), whereas the heat resistance is characterized by reversible changes of the (P). The investigation results of (Ts) of the polypropylene are mentioned. T. A. Aksenova participated in working out the experimental part of the paper. The (Ts) of (I) is especially important for the production of synthetic fibers and is determined by the change of the molecular weight (MW) and the solubility of (I) after a continuous heating of polypropylene. The (MW) was determined in this case according to the specific viscosity of a 0.5% solution of (I) in white spirit at 115° and at the same time the change of the ratio between the fraction of (I) being soluble in toluene at 20° and in white spirit at 115° and the fraction being insoluble in these solvents was determined. Pre-

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